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# RECENT GEOGRAPHIC MIGRATION TRENDS IN MONTANA

Kenneth P. Johnson

BUREAU OF BUSINESS AND ECONOMIC RESEARCH missoula ● montana

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University of Montana
School of Business Administration
Bureau of Business and Economic Research

1970

# INTRODUCTION

During the decade 1950 to 1960 Montana lost, net, about 25,000 people through geographic migration. Considerable analysis has been done regarding these net migrants, and interested parties are now able to find reports giving detailed information on the more important characteristics of the movers.[1]

The primary data requirements for preparation of any of these reports include a complete detailed count of Montana's population at two distinct dates. Hence it has not been possible to determine precisely the characteristics of movers for a period more recent than the 1950 to 1960 decade.

But important changes may have taken place in the characteristics of movers since that decade. Therefore, to investigate this proposition, estimated data relating to the characteristics of Montana's population in 1968 will be used to analyze net migration for the eight-year period, April 1, 1960 (the last census date) to July 1, 1968. The age distribution

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1. See: U.S. Department of Commerce, Bureau of the Census, "Revised Estimates of the Population of States and Components of Population Change: 1950 to 1960," Current Population Reports, Series P-25, no. 304 (Washington, D.C.: U.S. Government Printing Office, April 8, 1965).

U.S. Department of Agriculture, Economic Research Service, Net Migration of the Population, 1950-1960 by Age, Sex, and Color, vol. 1, pt. 6 (in cooperation with the Research Foundation, Oklahoma State University and Area Redevelopment Administration, U.S. Department of Commerce).

Kenneth P. Johnson, "Net Geographic Migration for Montana, 1950-1960 by Sex, Age, and Educational Level," Staff Study, Montana Economic Study (Missoula, Montana: Bureau of Business and Economic Research, University of Montana, April 1970).

of the total net migrants during this period will be estimated and specific net migrations for subregions of the state will be computed. These results will then be compared to similar numbers for the decade April 1, 1950 to April 1, 1960 in order to determine any changes in the age selectivity of the migrants and to isolate possible shifts in the migration patterns of the geographic subregions of the state.

Although figures on migration characteristics derived from estimated population data will, by their nature, be less precise than numbers derived from actual census counts, they should adequately serve to indicate the general characteristics of our more recent migrants. It is felt that they may also be meaningfully compared to historic data.

## AGE CHARACTERISTICS OF MONTANA'S NET MIGRANTS

The U.S. Bureau of the Census routinely estimates the population of states for July 1 of each post-censal year and provides some general detail regarding the age distributions of the state totals. Their most current report is for July 1, 1968, and is the source of the age detail on Montana's population on that date.

There were 674,767 people in Montana on April 1, 1960.[2] From that date through July 1, 1968, there were 122,647 births and 54,368 deaths recorded in Montana.[3] Thus, if there had been zero net migration during the period, Montana would have had 743,046 people on July 1, 1968. However, the census estimate of Montana's population on July 1, 1968, was 696,000 and the difference must be attributed to net geographic migration.[4]

Specifically, Montana experienced another net loss of 47,046 people through geographic migration during the period 1960-1968. We wish to estimate the distribution of these 47,046 people over groups aged 0-4, 5-13, 14-17, 18-20, 21-44, 45-64, and 65+ in 1968.

The procedure used here is similar to that used to estimate total

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2. U.S. Department of Commerce, Bureau of the Census, U.S. Census of Population: 1960, Detailed Characteristics, Montana, Final Report PC(1), 28D (Washington, D.C.: U.S. Government Printing Office, 1962).

3. Montana State Department of Health, 1968 Annual Statistical Supplement (Helena, Montana, 1969), page 4.

4. U.S. Department of Commerce, Bureau of the Census, "Estimates of the Population of States, by Age: 1968 With Provisional Estimates for July 1, 1969," Current Population Reports, Series P-25, no. 437 (Washington, D.C.: U.S. Government Printing Office, January 16, 1970).

net migration. An "expected" 1968 population for each cohort is calculated and then compared to the estimated 1968 population.[5] Thus, for example, since the cohort aged 5.75 to 9.74 years on April 1, 1960 is the cohort aged 14-17 on July 1, 1968, the 1960 Census total for the age group 5.75 to 9.74 minus interim deaths for this cohort would be the expected population aged 14-17 on July 1, 1968, if there had been zero net migration.

Vital statistics on births after April 1, 1960 were used in estimating the initial cohort size for the two youngest 1968 age groups, since all of the 0-4 group and part of the 5-13 group were born after the census. Because it is impossible to use vital statistics on deaths in this analysis since adequate age detail on deaths is not available, it is necessary to estimate the number who survived to July 1, 1968 for each cohort through the use of life table survival rates.[6] However, some error is inherent in the use of these rates to estimate actual survivors, and a small adjustment was necessary in order to make the age group data agree with the independently derived totals. As stated earlier, the total number of Montanans we would expect in 1968 if there had been zero interim net migration is 743,046. When using the life table rates instead of actual deaths data, this number was 741,051 or in error by about 2,000 people. Since the

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5. The term "cohort" refers to a group of persons born during the same specific period of time. Thus, the cohort aged (for example) 14-17 on July 1, 1968, is the birth cohort from the period July 2, 1950, to July 1, 1954, which is the group aged 5.75 to 9.74 on April 1, 1960. The appropriate 1960 age groups for each of the other 1968 age groups can be computed in a similar fashion to facilitate computation of the initial size of the cohorts.

6. U.S. Department of Health, Education, and Welfare, National Center for Health Statistics, "Montana State Life Tables: 1959-61," Life Tables: 1959-61, vol. 2, no. 27 (Washington, D.C.: U.S. Government Printing Office, June 1966).

former figure can be presumed to be correct, the number of life table survivors for each age group was expanded by 1.0027 in order to yield a consistent total. Only negligible error is introduced through this convention, since the adjustment to each age group is about 1/4 of 1 percent.

The data and computations used to estimate the age specific net migrations are presented in table 1.

Several implications may be directly drawn from the results in table 1. For example, it appears that the retired segment of Montana's population was affected only slightly by net migration whereas the younger segment of the work force responded to either a negative stimulus within the state or a positive stimulus from without--causing the rate of loss for that group to be quite high.

Unfortunately, the numbers presented in table 1 cannot be directly compared to similar data for the decade 1950 to 1960 since the period being analyzed here is only 8 1/4 years long. We wish to establish some general trends in this paper and, to do so, it is necessary to derive comparable data for the two periods. To fulfill this need, the age composition of the total loss during each of the two periods will be analyzed and the average yearly loss will be analyzed for each age group in each period. The age distributions are presented in table 2.

The most notable change between the two periods is that the proportion of net migration accounted for by people aged 21-44 nearly doubled in the later period. This age group represents the majority of parents with children at home. The increased proportion for the age group 21-44 was therefore accompanied by an increased proportion (also nearly doubled in the later period) of net migration accounted for by young people aged 5-13.

TABLE 1

Age Specific Net Migration for Montana: April 1, 1960 to July 1, 1968

| 1968 Age Group | Initial Size of Cohort | Number Surviving to July 1, 1968 | Estimated Population on July 1, 1968 | Interim Net Geographic Migration | Rate of Interim Net Migration | Percentage Distribution of Net Migrants |
|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) |
| 0-4 | 67,408 | 65,804 | 64,000 | - 1,804 | - 2.68 | 3.83 |
| 5-13 | 150,571 | 148,715 | 139,000 | - 9,715 | - 6.45 | 20.65 |
| 14-17 | 61,498 | 61,357 | 59,000 | - 2,357 | - 3.83 | 5.01 |
| 18-20 | 42,690 | 42,456 | 37,000 | - 5,456 | -12.78 | 11.60 |
| 21-44 | 214,906 | 212,025 | 189,000 | -23,025 | -10.71 | 48.94 |
| 45-64 | 154,754 | 144,869 | 141,000 | - 3,869 | - 2.50 | 8.23 |
| 65+ | 105,587 | 67,820 | 67,000 | - 820 | - 0.78 | 1.74 |
| Total | 797,414 | 743,046 | 696,000 | -47,046 | - 5.90 | 100.00 |

Sources: Column (1) Derived from: U.S. Department of Commerce, Bureau of the Census, U.S. Census of Population: 1960, Detailed Characteristics, Montana, Final Report PC(1), 28D (Washington, D.C.: U.S. Government Printing Office, 1962).

Montana State Department of Health, 1968 Annual Statistical Supplement (Helena, Montana, 1969), page 4.

Column (2) Derived through application of Life Table Survival Rates to the numbers in column (1).

Column (3) Derived from: U.S. Department of Commerce, Bureau of the Census, "Estimates of the Population of States, by Age: 1968 With Provisional Estimates for July 1, 1969," Current Population Reports, Series P-25, no. 437 (Washington, D.C.: U.S. Government Printing Office, January 16, 1970).

Column (4) Difference between column (2) and column (3) entries.

Column (5) Expressed as percentage of initial cohort size.

TABLE 2

Percentage Distribution of Montana's
Net Geographic Migrants, by Age Groups

| Age Group* | 1950 to 1960 | 1960 to 1968 |
|---|---|---|
| | (1) | (2) |
| 0-4 | 4.26 | 3.83 |
| 5-13 | 10.97 | 20.65 |
| 14-17 | .82 | 5.01 |
| 18-20 | 19.38 | 11.60 |
| 21-44 | 27.76 | 48.94 |
| 45-64 | 22.45 | 8.23 |
| 65+ | 14.36 | 1.74 |
| Total | 100.00 | 100.00 |
| | (Base = 25,167) | (Base = 47,046) |

Sources: Column (1) Calculated from results in: U.S. Department of Agriculture, Economic Research Service, Net Migration of the Population, 1950-1960 by Age, Sex, and Color, vol. 1, part 6 (in cooperation with the Research Foundation, Oklahoma State University and Area Redevelopment Administration, U.S. Department of Commerce).

Column (2) Calculated from results in table 1.

*Age group refers to age of persons at the end of the appropriate period.

The small proportion of net migrants accounted for by persons aged 0-4 in both periods must be interpreted with care. Since these are the people born during the last 5 years of the period, they have only been exposed to migration pressure an average of 2 1/2 years in both cases. (See discussion of exposure factors later in this paper.)

One would, at any rate, expect the proportion aged 0-4 to have increased along with the proportion aged 21-44. Two factors may have caused this proportion to show a modest decline. First, some of the parents of this group of children are in the age group 18-20 and the proportion of the net loss who were aged 18-20 declined in the latter period. Second, (and perhaps most important) the crude birth rate in Montana has declined steadily since 1960. In the 5 years prior to April 1, 1960, there were 88,295 children born in Montana whereas there were only 67,408 born during the 5 years prior to July 1, 1968. Thus, there was a smaller pool of possible migrants in this age group during the latter period. (It is, of course, also possible that parents of preschool children are less inclined to move from Montana than parents of school-age children. However, national figures indicate that the reverse is true with respect to general mobility and there is probably no appreciable difference between Montana and the rest of the nation in this regard.)

The retired age group (65 and over) and the older working force age group (45-64 years old) both comprised a significantly smaller proportion of the movers from 1960 to 1968 than they did of the movers from 1950 to 1960. In fact, the retired segment contributed almost nothing to the migration stream and the proportion of the loss who

were aged 45-64 dropped by nearly two-thirds. The increased proportions observed for the elementary school-age group and the young work force are probably related primarily to the smaller proportion of movers from these two oldest groups.

If one considers that the net loss for the retired age group has declined dramatically while the overall level of loss has greatly increased, it is reasonable to assume that whatever stimuli are negatively affecting the other age groups (primarily the young work force) do not so affect the retired segment of our population. Such a situation implies that those factors affecting the young work force--but not the retired people--are probably the more important forces at work here. Since demand for labor and relative wage levels affect the work force, but not the retired population, they may be more important influences on the total migration-streams than the forces originating in the more universal factors such as relative tax levels, relative cost of living, and general socio-political conditions. It should not, of course, be presumed that the latter factors are of no importance since the actual reasons for Montana's population losses are, by necessity, a matter of conjecture.

It appears, then, that the loss through geographic migration is becoming increasingly concentrated in the younger age groups in Montana. It is, however, interesting to note that the age distribution of Montana's net loss from 1960 to 1968 very closely parallels the age distribution of all interstate movers in the nation for the one-year

period April 1, 1967 to April 1, 1968;[7] whereas the age distribution of the net loss from 1950 to 1960 is somewhat dissimilar from the age distribution of all interstate movers in the nation for the one-year period April 1, 1959 to April 1, 1960.[8] It is not unreasonable to assert that the age distribution of the loss observed for the period 1960 to 1968 is about what one would expect in view of national trends, whereas the distribution of the loss for the previous period is somewhat unusual.

The actual numbers related to these comparisons are given in table 3. It is apparent that the age distribution for all movers did not change much on the national level, whereas the age distribution of Montana's net migrants shifted noticeably to where it was more in line with national indicators.

The preceding data were presented primarily to point out shifts in the age-selectivity of the migrants. However, such figures are of no use in determining actual levels of migration and may even be misleading on that count. For example, although the proportion of the net migrants who were aged 18-20 declined in the latter period, the actual number moving increased significantly.

In order to make meaningful comparisons in absolute levels of migration for the two periods it is necessary to convert the age group totals to data which are comparable for both the period 1950

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7. U.S. Department of Commerce, Bureau of the Census, "Mobility of the Population of the United States, March 1967 to March 1968," Current Population Reports, Series P-20, no. 188 (Washington, D.C.: U.S. Government Printing Office, August 14, 1969).

8. U.S. Department of Commerce, Bureau of the Census, "Mobility of the Population of the United States, March 1959 to 1960," Current Population Reports, Series P-20, no. 113 (Washington, D.C.: U.S. Government Printing Office, January 22, 1962).

TABLE 3

Age Distribution of Selected Groups of Migrants
(Percent)

| Age at End of Period | All Interstate Movers in the Nation from 3/1/59 to 3/1/60 | Net Migrants from Montana During 1950 to 1960 | All Interstate Movers in the Nation from 3/1/67 to 3/1/68 | Net Migrants from Montana During 1960 to 1968 |
|---|---|---|---|---|
| | (1) | (2) | (3) | (4) |
| 0-4* | 14.05 | 4.26 | 12.41 | 3.83 |
| 5-13 | 16.37 | 10.97 | 19.49 | 20.65 |
| 14-17 | 4.53 | .82 | 5.06 | 5.01 |
| 18-20 | 7.33 | 19.38 | 8.13 | 11.60 |
| 21-44 | 45.81 | 27.76 | 45.16 | 48.94 |
| 45-64 | 8.49 | 22.45 | 7.25 | 8.23 |
| 65+ | 3.42 | 14.36 | 2.50 | 1.74 |
| Total | 100.00 | 100.00 | 100.00 | 100.00 |

Sources: Column (1) Derived from: U.S. Department of Commerce, Bureau of the Census, "Mobility of the Population of the United States, March 1959 to 1960," Current Population Reports, Series P-20, no. 113 (Washington, D.C.: U.S. Government Printing Office, January 22, 1962).

Column (2) Derived from table 2.

Column (3) Derived from: U.S. Department of Commerce, Bureau of the Census, "Mobility of the Population of the United States, March 1967 to March 1968," Current Population Reports, Series P-20, no. 188 (Washington, D.C.: U.S. Governemnt Printing Office, August 14, 1969).

Column (4) Derived from table 2.

*The state figure for this age group is not comparable to the national figure since the group is a birth cohort and there are different exposure factors involved.

to 1960 and the period 1960 to 1968. This is done by calculating, for each group, the average net loss per "year of exposure" during each of the two periods where "years of exposure" refers to the average number of years during a period for which the members of an age cohort have been subject to the possibility of migration.

In all age groups which do not include births occurring after the start of the period, the years of exposure can be computed as simply the length of the period; 10 years for the decade April 1, 1950 to April 1, 1960 and 8 1/4 years for the period April 1, 1960 to July 1, 1968. However, when a cohort contains births which occurred after the start of the migration period, then at least part of the group has not been exposed to migration pressure for the entire period and the average number of years of exposure for the group must be adjusted to account for this. For example, the group aged 0-4 at the end of each period is comprised entirely of births which occurred during the final 5 years of the period. Thus, the longest anyone in that cohort has been exposed to migration pressures is five years. The exposure factor for someone born immediately prior to the end of the period is essentially zero. The average number of years of exposure for this group is therefore 2 1/2.

The computations for a cohort involving both births after the start of a period and people alive at the start of a period are somewhat more complex. They are, however, included here for the information of interested readers. Consider that there are 9 total years of age in the group aged 5-13. At the end of the decade April 1, 1950 to April 1, 1960 five of these nine years of age were from births occurring from April 1, 1950 to April 1, 1955, and four of them were people

already alive on April 1, 1950. The exposure factor for the latter group is 10 years and the average years of exposure for the birth segment is 7 1/2 $\left[\frac{(5 + 10)}{2}\right]$. The weighted average of these numbers is the average years of exposure for this entire age group which implies the correct number is 8.61 [(5/9) x (7 1/2) + (4/9) x (10)].

Considering this same age group at the end of the period from April 1, 1960 to July 1, 1968, note that 3 1/4 of the 9 years of age are from births during April 1, 1960 to July 1, 1963 and 5 3/4 of the 9 years of age are people already alive at the start of the period. The years of exposure for the latter group is 8 1/4 and the average years of exposure for the birth segment is 6.625 $\left[\frac{(5 + 8.25)}{2}\right]$. The weighted average is 7.66 which is the average number of years of exposure for this age cohort during the period April 1, 1960 to July 1, 1968.

The results for the comparison of actual levels of loss are given in table 4.

The first item of interest here is that the total loss in an average year of the period April 1, 1960 to July 1, 1968 was over twice as great as the total loss in an average year of the preceding decade. There are probably many different reasons why this might occur, but it is apparent from the following that the principal source of this change is the group 21-44 years of age.

In absolute terms, the state was losing, on the average, over 3,000 more people per year in the later period than the former. This increase may have been due almost entirely to increased losses in the groups comprising the young work force and their dependents of elementary school age (age groups 21-44 and 5-13). Changes in the losses of the other age groups very nearly balanced one another.

Net Migration for Montana--1950 to 1960 and 1960 to 1968

| Age in 1960 | Net Migration During 1950-1960 | Average Number of Years of Exposure | Average Number Moving Per Year of Exposure | Age in 1968 | Net Migration During 1960-1968 | Average Number of Years of Exposure | Average Number Moving Per Year of Exposure | Ratio of Average Losses | Difference Between Average Losses |
|---|---|---|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | | (4) | (5) | (6) | (7) | (8) |
| 0-4 | -1,073 | 2.50 | -429 | 0-4 | - 1,804 | 2.50 | - 722 | 1.683 | 293 |
| 5-13 | -2,760 | 8.61 | -320 | 5-13 | - 9,715 | 7.66 | -1,268 | 3.962 | 948 |
| 14-17 | - 206 | 10.00 | - 21 | 14-17 | - 2,357 | 8.25 | - 286 | 13.619[a] | 265 |
| 18-20 | -4,878 | 10.00 | -488 | 18-20 | - 5,456 | 8.25 | - 661 | 1.354 | 173 |
| 21-44 | -6,986 | 10.00 | -699 | 21-44 | -23,025 | 8.25 | -2,791 | 3.993 | 2,092 |
| 45-64 | -5,649 | 10.00 | -565 | 45-64 | - 3,869 | 8.25 | - 469 | .830 | -96 |
| 65+ | -3,615 | 10.00 | -362 | 65+ | - 820 | 8.25 | - 99 | .273 | -263 |
| Total | -25,167 | 10.00 | -2,517[b] | Total | -47,046 | 8.25 | -5,703[b] | 2.266 | 3,186[b] |

Sources: Column (1) Compiled from results in: U.S. Department of Agriculture, Economic Research Service, Net Migration of the Population, 1950-1960 by Age, Sex, and Color, vol. 1, part 6 (in cooperation with the Research Foundation, Oklahoma State University and Area Redevelopment Administration, U.S. Department of Commerce).

Column (2) Explained in text.

Column (3) Quotient of column (1) entry divided by column (2) entry.

Column (4) Derived from table 1.

Column (5) Explained in text.

Column (6) Quotient of column (4) entry divided by column (5) entry.

Column (7) Quotient of column (6) entry divided by column (3) entry.

Column (8) Column (3) entry minus column (6) entry.

[a]Since only 21 people from this age group were lost in an average year of the decade 1950 to 1960, this ratio of 13.6 cannot be interpreted as being highly pertinent.

[b]These numbers are not a total of the column.

The number lost from the groups aged 21-44 and 5-13 in an average year of the period April 1, 1960 to July 1, 1968 was about four times as high as the number lost in an average year of the preceding decade. The two groups together accounted for about 70 percent of all loss during the later period (see table 3). Since the prework force population must move with its guardians, it appears that the great majority (about 80 percent if we include preschool and high school age groups as dependents) of the loss to Montana can be attributed to the great number of members of the young work force who leave the state every year. Furthermore, the fact that the overall level of loss per year has more than doubled in the more recent period can be attributed almost entirely to the effect of the quadrupled level of loss in the group aged 21-44.

Montana (and the nation) has for some years had many more young people entering the work force than there were older people retiring. The demand for labor in this state has not expanded rapidly enough to accommodate these young people and they have been forced to move out of state in order to find work. This group has, in general, a higher level of educational achievement than the older work force. It may be that the out movement for the young work force has been further accelerated through the lack of increased demand for professional or highly technical workers in Montana. Many young people may be leaving the state because the only jobs available in Montana are not of a nature which would utilize their talents.

As is apparent from the national data in table 3, the young work force is easily more mobile than any other segment of the population. It is reasonable to assume, then, that the members of this group would respond more readily to any adverse conditions in Montana. For example,

if Montana does not compare favorably with the nation regarding wage levels, per capita income levels, job opportunities, etc., then we should expect the impact to fall most heavily on the young work force (although the effect is most certainly felt throughout the population).

It is reasonable to assume that expanding the demand for labor would certainly decrease the net loss somewhat. If the demand for professional and technical labor could be expanded, then the loss would probably be even less; and if general economic opportunities in Montana compare more favorably in the future with those in the nation, the state should experience a much smaller loss of people.[9]

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9. We have taken the liberty here of simply implying that general economic opportunities in Montana have not compared favorably with those in the nation. For some discussion and verification of this see:

Peter C. Lin, Income Trends in Montana: 1948 to 1968, and Paul E. Polzin, Employment Trends: 1950-1968, Staff Studies, Montana Economic Study (Missoula, Montana: Bureau of Business and Economic Research, University of Montana, June 1970).

## REGIONAL MIGRATION PATTERNS IN MONTANA

The preceding section has served to indicate the age distribution of Montana's migrants and to cite the changes which have occurred in this distribution in recent years as compared to the period 1950 to 1960. Possible reasons why the state's rate of loss is increasing dramatically and is drawing more heavily on the younger population were also suggested. The economic conditions in any state as large, physically, as Montana can, however, vary greatly from one subregion to another and this analysis would not be complete without an examination of the regional distribution of the net migrants.

A general implication of the preceding section is that for some reason Montana as a whole is relatively "less attractive" than the rest of the nation as a whole. It is our intent in this section to determine if this characteristic is universally valid throughout the state or if, in fact, there are major differentials between the subregions with respect to their migration streams.

The state was subdivided into six economic regions as indicated on the map in figure 1. They simply divide the state into the northwestern, north central, northeastern, southwestern, south central, and southeastern regions, numbered I, II, III, IV, V, and VI respectively. Regional population estimates as of July 1, 1968 were calculated from county estimates for that same date;[10] and the net migration from April 1, 1960 to July 1, 1968 was derived for each region in the usual way, (i.e., via

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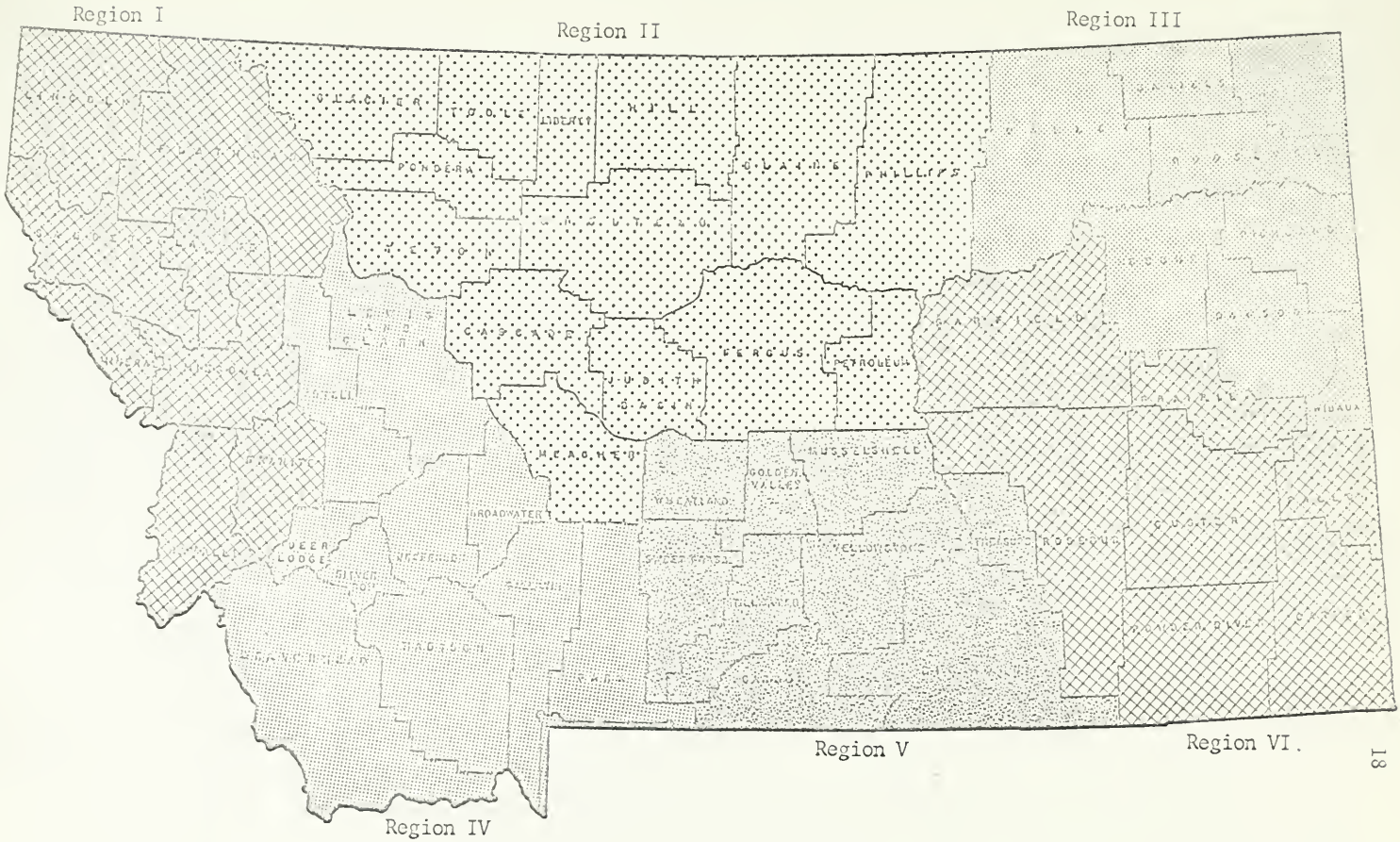
10. "Population Estimates for Montana Counties as of July 1, 1968" (Missoula, Montana: Bureau of Business and Economic Research, University of Montana, July 1969).

Montana Economic Regions



the formula: 1968 population = 1960 population + interim natural increase + interim net migration).

These results, plus similar data for April 1, 1950 to April 1, 1960, are presented in table 5. (Age detail is not available on a subregional basis so only totals are given.)

The data for the two periods presented in table 5 are, again, not directly comparable since the periods are of unequal length. Some adjustment is necessary in order to meaningfully analyze trends in regional migrations, so we have analyzed the data in terms of average yearly level of net migration and average yearly rate of net migration for each region during each period. The results are presented in table 6.

Before attempting to analyze the regional changes apparent from table 6, it may be enlightening to note the distribution of Montana counties which gained population through migration. There were ten such counties for each of the periods considered in this work. However, the geographic location of counties having this characteristic changed considerably, as can be verified from the maps in figures 2 and 3.

During the period 1950 to 1960, all regions except the southeastern one (Region VI) had at least one county which gained population through migration, whereas the counties gaining through migration during the period 1960 to 1968 are concentrated exclusively in the westernmost regions (Regions I and IV). This fact, in itself, implies that a major differential in migration patterns exists between the western part of Montana and the rest of the state. The extent of this differential can be determined from the results in table 6.

Montana Population: 1950, 1960, 1968, and Components of Change, by Region

| Region | Population 4/1/50 | Natural Increase 4/1/50 to 4/1/60 | Net Migration 4/1/50 to 4/1/60 | Population 4/1/60 | Natural Increase 4/1/60 to 7/1/68 | Net Migration 4/1/60 to 7/1/68 | Population 7/1/68 | Rate of Net Migration 1950 to 1960* | Rate of Net Migration 1960 to 1968* |
|---|---|---|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) |
| I | 114,454 | 18,643 | - 4,556 | 128,541 | 12,654 | +11,463 | 152,658 | - 3.98 | + 8.92 |
| II | 141,772 | 31,723 | - 2,304 | 171,191 | 21,418 | -23,480 | 169,129 | - 1.63 | -13.72 |
| III | 56,176 | 13,736 | - 3,051 | 66,861 | 8,804 | -14,903 | 60,762 | - 5.43 | -22.29 |
| IV | 149,380 | 20,307 | -10,819 | 158,868 | 11,673 | - 6,835 | 163,706 | - 7.24 | - 4.30 |
| V | 96,311 | 18,734 | + 1,573 | 116,618 | 10,865 | -10,981 | 116,502 | + 1.63 | - 9.42 |
| VI | 32,931 | 5,742 | - 5,985 | 32,688 | 2,865 | - 2,310 | 33,243 | -18.17 | - 7.07 |
| Total | 591,024 | 108,885 | -25,142 | 674,767 | 68,279 | -47,046 | 696,000 | - 4.25 | - 6.97 |

Sources: Column (1) U.S. Department of Commerce, Bureau of the Census, U.S. Census of Population: 1950, Characteristics of the Population, Montana, vol. 2, part 26, chapter B (Washington, D.C.: U.S. Government Printing Office, 1952).

Column (2) Montana State Department of Health, 1968 Annual Statistical Supplement (Helena, Montana, 1969), page 4.

Column (3) Compiled from: U.S. Department of Agriculture, Economic Research Service, Net Migration of the Population, 1950-1960 by Age, Sex, and Color, vol. 1, part 6 (in cooperation with the Research Foundation, Oklahoma State University and Area Redevelopment Administration, U.S. Department of Commerce).

Column (4) U.S. Department of Commerce, Bureau of the Census, U.S. Census of Population: 1960, General Population Characteristics, Montana, Final Report PC (1)-28B (Washington, D.C.: U.S. Government Printing Office, 1961).

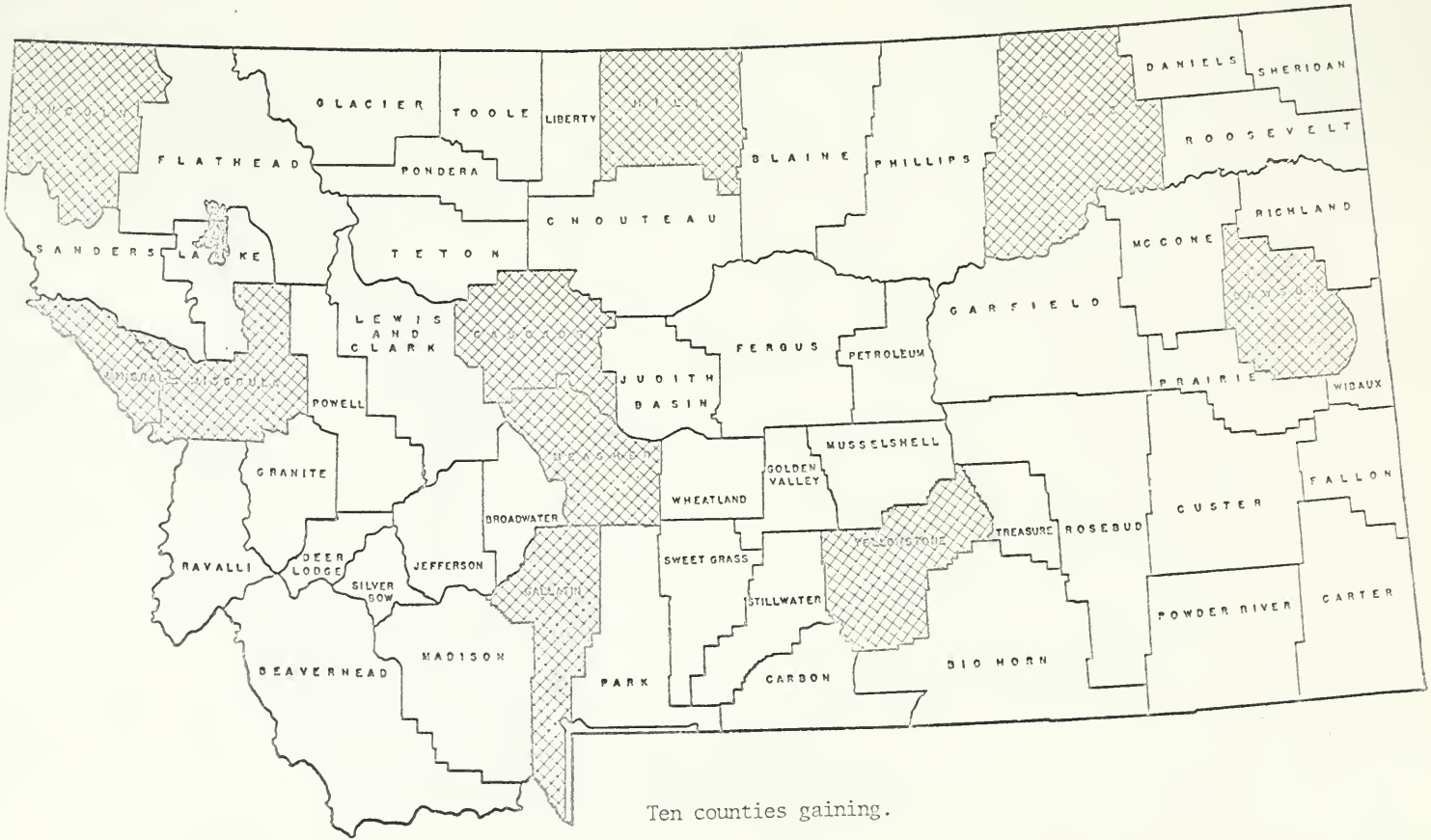
Column (5) Montana State Department of Health, 1968 Annual Statistical Supplement (Helena, Montana, 1969), page 4.

Column (6) Differences between column (7) and the sum of columns (4) and (5).

Column (7) "Population Estimates for Montana Counties as of July 1, 1968" (Missoula, Montana: Bureau of Business and Economic Research, University of Montana, July 1969).

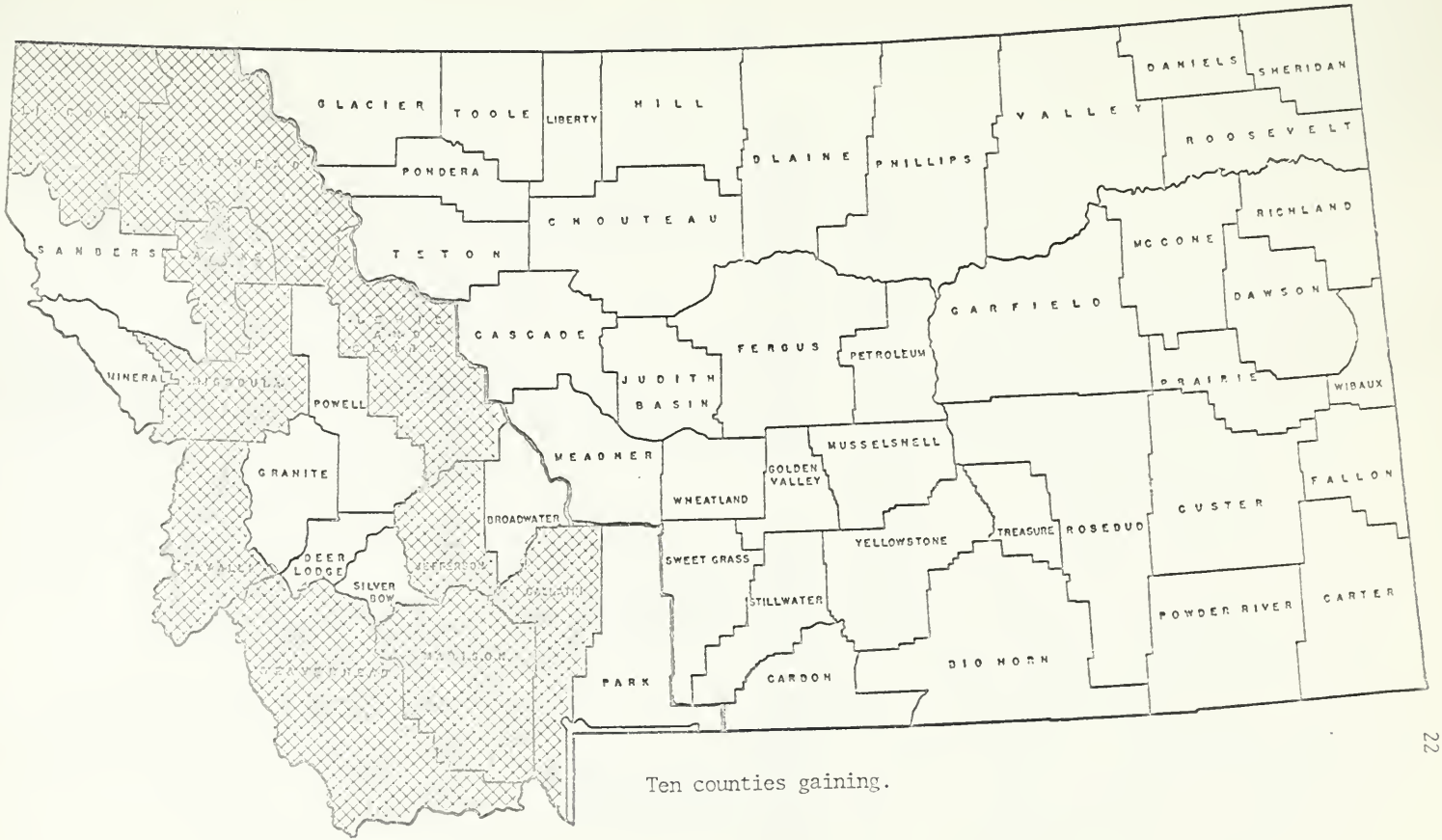
* Rates for both periods are shown as percent of beginning population. The rates for the two periods are not comparable directly since the periods are of different lengths.

Counties Experiencing Net In-Migration
Montana, 1950-1960




Ten counties gaining.

Counties Experiencing Net In-Migration
Montana, 1960-1968




Ten counties gaining.

TABLE 6

Average Yearly Net Migration for Montana:
1950 to 1960 and 1960 to 1968 by Region

| Region | Net Migration 4/1/50 to 4/1/60 | | Net Migration 4/1/60 to 7/1/68 | |
|---|---|---|---|---|
| | Average Yearly Level | Average Yearly Percent Rate | Average Yearly Level | Average Yearly Percent Rate |
| I | - 456 | - .398 | +1,389 | +1.081 |
| II | - 230 | - .163 | -2,846 | -1.663 |
| III | - 305 | - .543 | -1,806 | -2.702 |
| IV | -1,082 | - .724 | - 828 | - .521 |
| V | + 157 | + .163 | -1,331 | -1.142 |
| VI | - 598 | -1.817 | - 280 | - .857 |
| Total | -2,514 | - .425 | -5,702 | - .845 |

Source: Entries are calculated from the results in table 5.

The change in the migration streams for Region I is, perhaps, most immediately notable, since this change indicates that relative conditions in that area were greatly improved in the latter period. The fact that this region was growing about twice as fast as its rate of natural increase would indicate, whereas all other regions were losing people through migration, is certainly the result of many factors. We should consider that the Montana lumber industry, which continued to prosper through 1968, is concentrated in Region I. The University of Montana in Missoula County has shown significant growth in both enrollment and employment, and the construction project on the Libby Dam in Lincoln County has generated an appreciable (although temporary) expansion of the local economy there. All are important factors in the growth rate experienced by Region I.

In sharp contrast to the situation in Region I, we find that the north central region (Region II) lost over 23,000 people during the 1960 to 1968 period as compared to a loss of only about 2,300 during the previous decade. This level of loss results in an average yearly rate of loss ten times higher in the more recent period and indicates a general decline in the area's condition.

A major factor governing the growth in this area is that its economy is largely agricultural and the agricultural industry has not prospered on a par with other segments of the economy. The twofold impact of this situation is that many people are leaving the farms (and probably the area) and the industry itself is less able to generate additional activity in the local economy.

Also worthy of note is the fact that Malmstrom Air Force Base in Cascade County underwent major expansion during 1950 to 1960. The advent of the Korean War saw the number of military personnel there grow from about 1,500 in June of 1950 to about 5,000 by June of 1951 as Malmstrom became a major support base during that conflict. The base did not revert to its pre-1950 level following the end of the war, since the Strategic Air Command took it over shortly thereafter. The maintenance of an increased level of military activity and construction was probably chiefly responsible for the gain of about 7,000 people through migration experienced by Cascade County during 1950 to 1960.

Some military expansion in Cascade County continued into the sixties through the establishment of missile sites in the county. However, their construction was essentially complete by 1967 (construction employment fell from a monthly average of 2,456 in 1966 to a monthly average of 1,452 in 1968) and in the absence of this positive influence Cascade County experienced a net loss of population through migration during the 1960 to 1968 period. Thus, the greatly increased loss for the region as a whole may be attributed to a significant extent to the change in the migration streams for this one county. However, all counties in the region lost increased numbers of people.

Region III in the northeastern part of the state also lost significantly more people in the period 1960 to 1968. The average yearly rate of loss was about five times as high in this recent period as in the decade 1950 to 1960.

Region III, like Region II, is primarily agricultural and subject to the normal loss rate of those who leave farms and ranches. But the loss may also be attributed to a significant extent to the change in the migration streams of one Region III county (Valley) associated with the Air Force base near Glasgow.

Construction was started on the Glasgow Air Force Base prior to 1960, and the resulting influx of workers to that area was largely responsible for the fact that Valley County showed a net gain of nearly 3,000 people through migration during the period 1950 to 1960. The base was fully staffed with military personnel in the early 1960s but was almost completely vacated by July 1, 1968, when the Defense Department closed the base. About 6,000 military personnel and their dependents left that area in the spring of 1968; this occasioned an appreciable depression of the local economy and a consequent civilian movement out of the area.

Region IV in the southwestern part of the state, on the average, lost fewer people during the period 1960 to 1968 than it did during 1950 to 1960. As is apparent from figure 6, five of the ten counties in this region experienced a net gain through migration during 1960 to 1968. The losses experienced by the other five counties, however, more than offsets these in-migrations.

Region IV is less dependent on the lumber industry than is Region I and much more dependent on mining activity. This difference in the industrial mixture may explain much of the difference in the migration streams for the two regions. In July of 1968, region IV was still recovering from a major mine workers' strike, the effect of which probably extended through Deer Lodge, Silver Bow, and Powell Counties, but had only negligible impact in Region I. It is fairly certain that many people were forced to leave this region in search of employment during the

eight months these workers were on strike and, since the strike ended only three months prior to July 1, 1968, the region had probably not recovered to the full extent possible.

Also of major influence in this region was the closure of the smelter at Anaconda in Deer Lodge County which probably caused a loss of about 4,300 people. This smelter reopened in August of 1969 and the renewed activity should effect some population gains for Deer Lodge County.

In Region V we have the opposite of the situation noted for Region I. Specifically, migration from 1960 to 1968 caused a loss of nearly 11,000 people from this region against its earlier gain of about 1,500 from 1950 to 1960. The loss of about 8,000 people experienced by all Region V counties other than Yellowstone during 1950 to 1960 was offset by a gain of about 9,500 people in Yellowstone County resulting in the region gaining about 1,500 people through migration during the decade. During 1960 to 1968, the net loss for all Region V counties, excluding Yellowstone, was only about 5,200 people, but the loss for the region as a whole was increased by a loss of about 5,800 from Yellowstone County resulting in a total net loss of nearly 11,000 people during the 8 1/4 year period. Obviously, the source of the change noted in Region V was almost exclusively related to the change for Yellowstone County.

It has been hypothesized that activities of major oil companies, interested in the oil fields of eastern Montana, may have had a positive influence in Yellowstone County during the 1950s, and that a decline in these activities after 1960 had a significant effect on the county's migration streams. This would partially explain the change but is a rather weak conjecture. The primary influences at work there cannot be isolated.

The statewide situation of the demand for labor not expanding rapidly enough to accommodate new entrants into the labor force is also true in Yellowstone County. But why region V, or Yellowstone County should have expanded in the fifties and not in the sixties is a question this hypothesis does not answer.

Region VI, in the southwestern part of the state, lost people during both periods analyzed here. During 1960 to 1968 the rate of loss was generally reduced from the 1950 to 1960 rate in all seven of the counties in the region. No definite areawide conditions are apparent which caused this reduction (from about -600 per year to about -300 per year), but it may have resulted primarily from exploration for oil in this general area and the discovery in 1967 of a major field in Powder River County.

## FIGURES AND GRAPHS

Many of the results related to this study can be more concisely presented in graphic form and the representations in this section are included for the use of people desiring a visual display of the relationships between the two periods examined.

No new information is presented here. This section is simply the results of the preceding two sections, presented in an alternate fashion.

Average Yearly Net Geographic Migration
Montana Economic Regions, 1950-1960 and 1960-1968

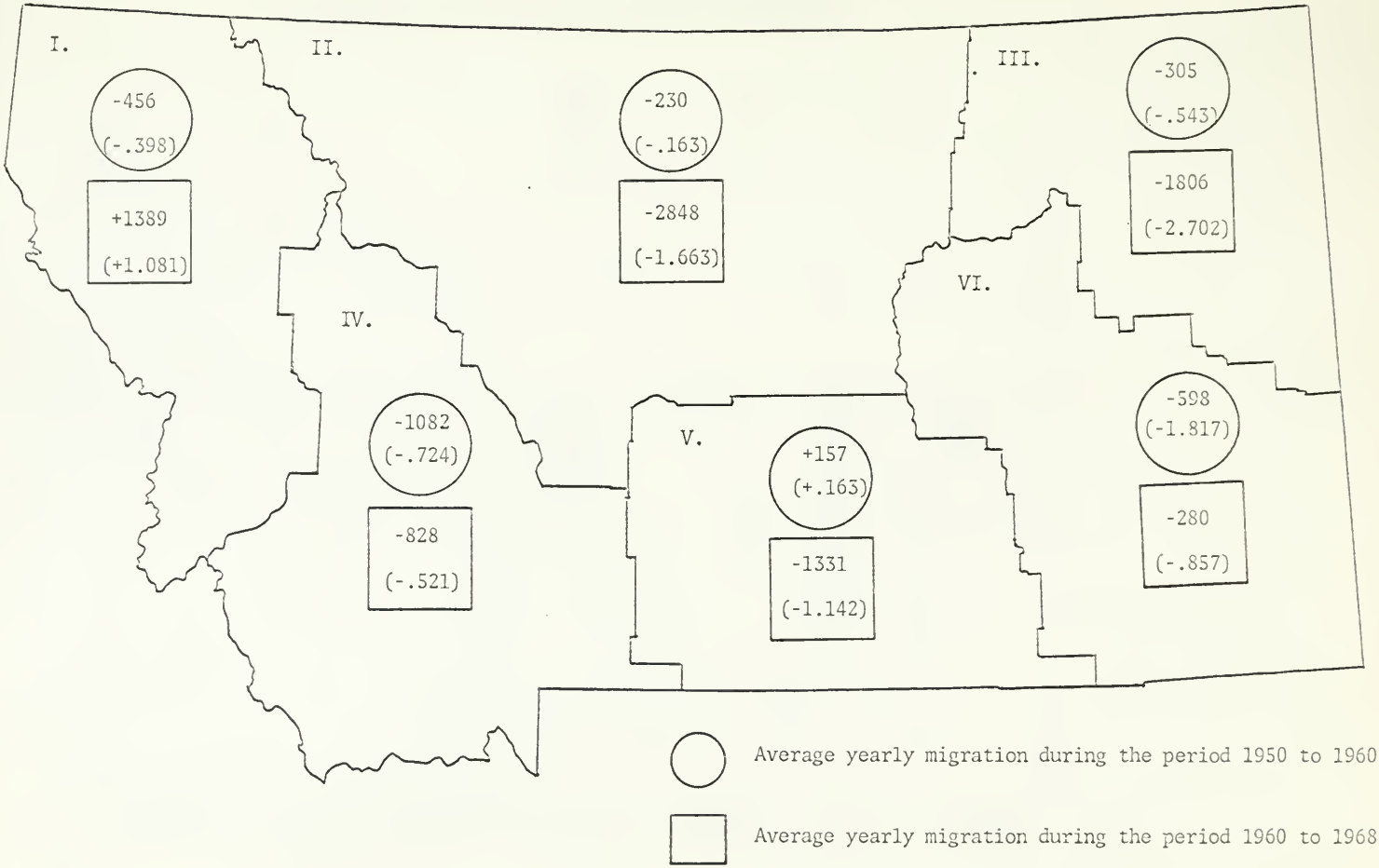


Figure 5

Average Yearly Percentage Rate of Net Migration
Montana Economic Regions, 1950-1960 and 1960-1968

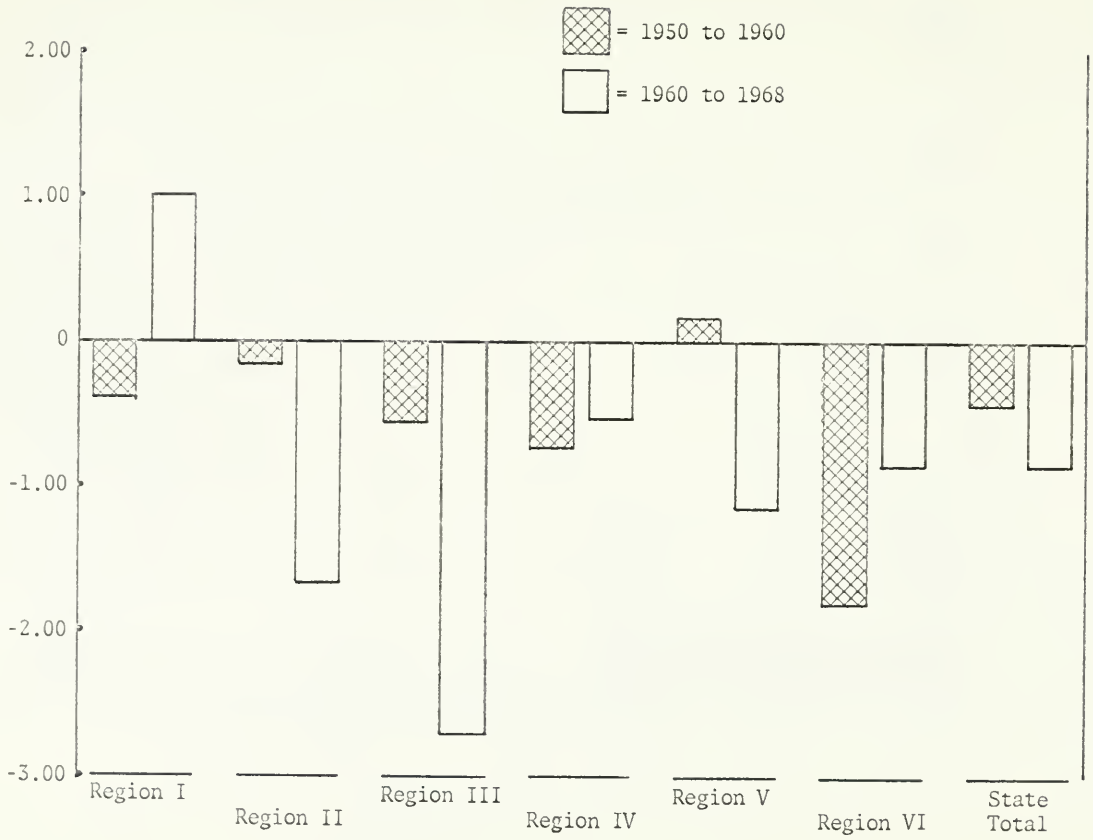


Figure 6

Average Yearly Net Migration
Montana Economic Regions, 1950-1960 and 1960-1968

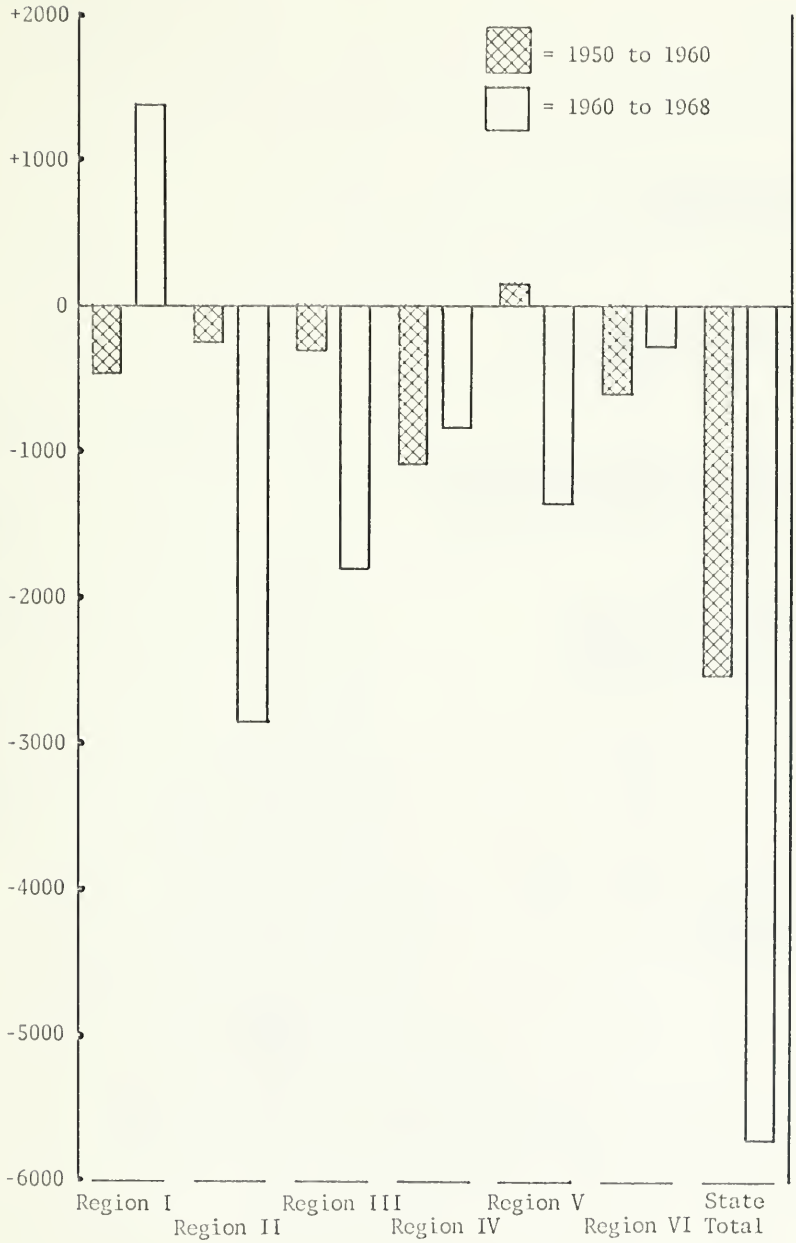


Figure 7

Percentage Distribution of Net Loss of Population
Through Geographic Migration
Montana, April 1, 1950 to April 1, 1960
and April 1, 1960 to July 1, 1968

(Age Groups Represent Age of Migrant at the End of Each Period)

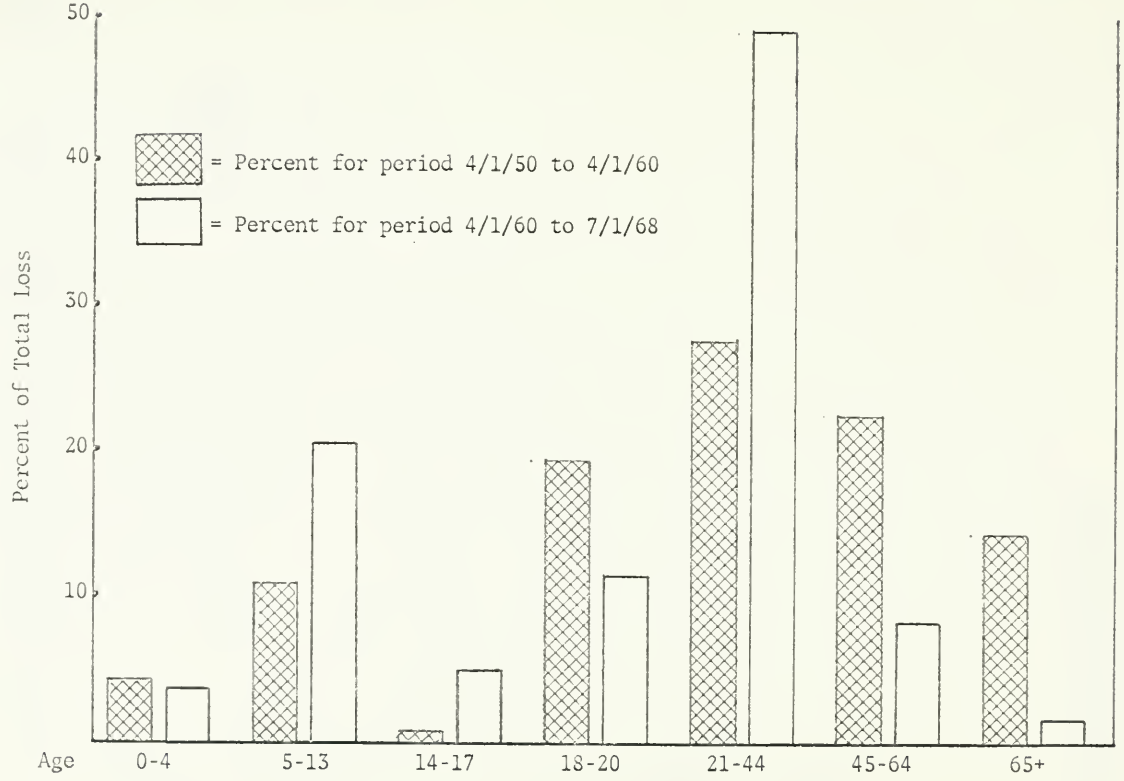


Figure 8

Average Loss (Per Year of Exposure)
Through Net Migration, by Age Group
Montana, 1950-1960 and 1960-1968

(Age Groups Represent Age of Migrant at the End of Each Period)

## SUMMARY

We have attempted to develop an understanding of Montana's net geographic migration trends through the analysis reported in this paper. Only very general characteristics of the net migrants are presented since data restrictions preclude any more detailed approach. However, several insights can be derived from the results.

Of primary concern to many people is the fact that the state is losing people through net interchanges of population with other areas. The results of this study indicate that the rate at which the state lost people was significantly increased in the period April 1, 1960 to July 1, 1968 as compared to the decade April 1, 1950 to April 1, 1960.

The results also indicate that the net loss during the recent period was felt much more heavily in the young work force than it was during 1950 to 1960. The age selectivity of net migration for Montana has changed to the extent that nearly 1/2 of the total loss during 1960 to 1968 was from the group aged 21 to 44 as opposed to the fact that this age group comprised only about 1/4 of the total loss from 1950 to 1960.

Finally, examination of the net migration data for subregions of the state makes it apparent that the migration situation in the western regions of the state has improved appreciably whereas, with the exception of the southeastern region, the rest of the state experienced a greatly increased rate of loss when comparing the period 1960 to 1968 to the decade 1950 to 1960. Regions II, III, and V all had fewer people in 1968 than in 1960 and region VI grew less than 2 percent.